

IN THE CLAIMS:

1 1. An interactive TV contextual content surfing system comprising:
2 a) creating apparatus, which creates program content for hyperlinking to
3 other program content;
4 b) Broadcast apparatus which broadcast interactive TV program content with
5 hyperlinks to other content;
6 c) receiver apparatus which receives and processes the interactive TV
7 program content with hyperlinks for display to a viewer; and
8 d) enabling apparatus, which enables a viewer to hyperlink from a program
9 being viewed to a related program.

1 2. The system of Claim 1 further wherein the enabling apparatus enables the viewer
2 to hyperlink from a scheduled or recorded program to a related program.

1 3. The system of Claim 1 further wherein the enabling apparatus enables the viewer
2 to hyperlink to a recording dialog when a related program may be in progress, previously
3 recorded or scheduled or broadcast in the future.

1 4. The system of Claim 1 further comprising:
2 g) broadcast apparatus which transmits audio/video program content and
3 program classification, together or in separate channels to the receiver; and

h) control apparatus, which enables the viewer to interact with the program content and the program classification.

5. The system of Claim 1 further comprising:

i) control apparatus at the receiver which groups program content by deduction based on viewer TV habits or information provided by the viewer.

6. The system of Claim 1 further comprising:

J) receiver apparatus which provides alternative hyperlinking of program content.

7. An interactive TV contextual content surfing system using inter-channel hyperlinking, comprising:

(a) a content creation station generating and transmitting interactive program information and classification information in a data streaming format;

(b) a TV broadcast station for receiving the streaming data;

(c) a broadcast server for processing classification categories in the streaming data and hyperlinking program information in related categories;

(d) a network coupled to the TV broadcast station for transmitting in separate channels the TV program information and classification information to a local TV station for retransmission to TV devices equipped with set-top boxes or directly transmitting the program information directly to the set-top boxes; and

12 e) viewer means including an interface enabling a viewer to view a program
13 in a category and using a hyperlink to switch to a new program related to the one being viewed.

1 8 The system of Claim 7 further comprising:

2 (f) storing apparatus included in the broadcast server and stores a dynamic
3 table of correspondence between TV program categories and TV channel numbers.

1 9. The system of Claim 7 further comprising:

2 (g) server apparatus which creates a hyperlink list of channels that are
3 broadcasting the same nature of programs by referencing the correspondence table.

1 10. The system of Claim 7 further comprising:

2 (h) server apparatus which transmits the hyperlink information to the set-top
3 box on a separate channel.

1 11. The system of Claim 7 further comprising:

2 (i) set-top box apparatus which stores TV broadcasts by categories of
3 programs in a first classification table.

1 12. The system of Claim 7 further comprising:

2 (j) set-top box apparatus which stores categories of program in a TV program
3 guide in a second classification table.

1 13. The system of Claim 7 further comprising:

2 k) local storing apparatus in the set-top box which stores recorded programs
3 and classifies categories of programs in a third classification table.

1 14. A method for interactive TV contextual content surfing using inter-channel
2 hyperlink, comprising the steps of:

3 a) creating program content including a description of program type,
4 producers, players, etc., for classification purposes;

5 b) transmitting the program content in a streaming data format to a broadcast
6 station and a broadcast server;

7 c) generating a correspondence table between TV program categories and
8 TV channel numbers in the broadcast server;

9 d) creating a hyperlink information of channels that are broadcasting the
10 same nature of programs by referencing the correspondence table;

11 e) broadcasting the hyperlink information to the list of channels in the
12 correspondence table;

13 f) transmitting the broadcast program information to a TV device including a
14 set-top box via a first channel;

15 g) transmitting the hyperlinking information to the set-top box via a second
16 channel; and

17 h) processing the broadcast hyperlinking information by the set-top box for
18 display on a TV screen.

1 15. The method of Claim 14 further comprising the step of
2 i) selecting a program to view in a category and hyperlinking to another
3 program in the category.

1 16. The method of Claim 14 further comprising the step of
2 j) creating a hyperlink list of channels that are broadcasting the same nature
3 of programs by referencing the correspondence table.

1 17. The method of Claim 14 further comprising the step of
2 k) storing a dynamic table of correspondence between TV program
3 categories and TV channel numbers.

1 18. The method of Claim 14 further comprising the step of:
2 l) storing recorded programs in a local storage and classifying categories of
3 programs in local storage in a third classification table.

1 19. The method of Claim 14 further comprising the step of:
2 m) storing TV broadcasts by categories of programs in a first classification
3 table including a TV program guide in the set-top box.

1 20. The method of Claim 14 further comprising the step of:

2 n) transmitting in separate channels the TV program information and
3 classification information to a local TV station for retransmission to TV devices equipped with
4 set-top boxes or directly transmitting the program information directly to the set-top boxes.

1 21. The method of Claim 14 further comprising the step of:

2 o) generating and transmitting interactive program information and
3 classification information in a data-streaming format.

1 22. A program medium, executable in a computer system for interactive TV
2 contextual content surfing using inter-channel hyperlink, comprising:

3 a) program instructions in the medium which creates program content
4 including a description of program type, producers, players, etc., for classification purposes;

5 b) program instructions in the medium which transmit the program content in
6 a streaming data format to a broadcast station and a broadcast server;

7 c) program instructions in the medium which generates a correspondence
8 table between TV program categories and TV channel numbers in the broadcast server;

9 d) program instructions in the medium, which creates a hyperlink
10 information of channels that are broadcasting the same nature of programs by referencing the
11 correspondence table;

12 e) program instructions in the medium, which broadcasts the hyperlink
13 information to the list of channels in the correspondence table;

14 f) program instructions in the medium, which transmits the broadcast,
15 program information to a TV device including a set-top box via a first channel;
16 g) program instructions in the medium which transmits the hyperlinking
17 information to the set-top box via a second channel; and
18 h) program instructions in the medium which processes the broadcast
19 hyperlinking information by the set-top box for display on a TV screen.

1 23. The program medium of Claim 22 further comprising:

2 i) selecting a program to view in a category and hyperlinking to another
3 program in the category.

1 24. The program medium of Claim 22 further comprising:

2 j) creating a hyperlink list of channels that are broadcasting the same nature
3 of programs by referencing the correspondence table.

1 25. The program medium of Claim 22 further comprising:

2 k) storing a dynamic table of correspondence between TV program
3 categories and TV channel numbers.

1 26. The program medium of Claim 22 further comprising:

2 l) storing recorded programs in a local storage and classifying categories of
3 programs in local storage in a third classification table.

1 27. A program medium, executable in an interactive TV computer system for
2 contextual content surfing, comprising:
3 a) program instructions which create program content for hyperlinking to
4 other program content;
5 b) program instructions which broadcast interactive TV program content
6 with hyperlinks to other content;
7 c) program instructions which receives and processes the interactive TV
8 program content with hyperlinks for display to a viewer; and
9 d) program instructions, which enables the viewer to hyperlink from a
10 program being viewed to a related program.

1 28. The program medium of Claim 27 further comprising:
2 e) program instructions, which enables a viewer to hyperlink from a
3 scheduled or recorded program to a related program.

1 29. The program medium of Claim 27 further comprising:
2 f) program instructions which enables a viewer to hyperlink to a recording
3 dialog when a related program may be in progress, previously recorded or scheduled or
4 broadcast in the future.

1 30. The program medium of Claim 27 further comprising:
2 g) program instructions which broadcasts audio/video program content and
3 program classification, together or in separate channels to the receiver; and
4 h) program instructions, which enables the viewer to interact with the
5 program content and the program classification.

1 31. The program medium of Claim 27 further comprising:
2 i) program instructions which groups program content at the receiver by
3 deduction based on viewer TV habits or information provided by the viewer.

1 32. The program medium of Claim 27 further comprising:
2 j) program instructions, which provides alternative hyperlinking of program
3 content.

1 33. A method for contextual content surfing in an interactive TV computer system,
2 comprising the steps of:
3 a) creating program content for hyperlinking to other program content;
4 b) broadcasting interactive TV program content with hyperlinks to other
5 content;
6 c) receiving and processing the interactive TV program content with
7 hyperlinks for display to a viewer; and
8 d) enabling the viewer to hyperlink from a program being viewed to a related
9 program.

1 34. The method of Claim 33 further comprising the step of:
2 e) enabling a viewer to hyperlink from a scheduled or recorded program to a
3 related program.

1 35. The method of Claim 33 further comprising the step of:
2 f) enabling a viewer to hyperlink to a recording dialog when a related
3 program may be in progress, previously recorded or scheduled or broadcast in the future.

1 36. The method of Claim 33 further comprising the step of:
2 g) broadcasting audio/video program content and program classification,
3 together or in separate channels to the receiver; and
4 h) interacting with the program content and the program classification.

1 37. The method of Claim 33 further comprising the step of:
2 i) grouping program content at the receiver by deduction based on viewer
3 TV habits or information provided by the viewer.

1 38. The method of Claim 33 further comprising the step of:
2 J) providing alternative hyperlinking of program content.

1 39. A broadcast server in a TV system, comprising:.

2 a) a correspondence table storing means for a dynamic table of

3 correspondence between TV program categories and TV channels number;

4 b) creation means for hyperlinking information which contains a list of

5 channels broadcasting the same nature of program by referencing the correspondence table, and

6 c) transmitting means for the hyperlinking information to TV devices

7 whereby upon successfully processing the broadcast hyperlinking information for display on a

8 TV screen a viewer surfs among the channels specified in the hyperlinking information.

1 40. A method for surfing hyperlinked information in a TV system, comprising the

2 steps of :

3 a) forming dynamic correspondence information of TV program categories

4 and TV channels number;

5 b) creating hyperlinking information which contains a list of channels

6 broadcasting the same nature of program by referencing the correspondence table, and

7 c) transmitting the hyperlinking information to TV devices whereby upon

8 successfully processing the broadcast hyperlinking information for display on a TV screen a

9 viewer surfs among the channels specified in the hyperlinking information.

1 41. A receiver for surfing hyperlinked information in a TV system, comprising :
2 a) storing apparatus, which receives program content including hyperlinks
3 and related channels;
4 b) classification information in the storing apparatus which relates program
5 content related to related channels; and
6 e) control apparatus, which enables a viewer to access the classification
7 information and surf among related channels.

1 42. A method for surfing hyperlinked information in a TV receiver, comprising the
2 steps of:
3 a) receiving program content including hyperlinks;
4 b) classifying received program content in tables according to the same
5 content; and
6 e) enabling a viewer to access the tables and surf among the related content.

1 43. A broadcast server in a TV system, comprising:.
2 a) correspondence information between TV program categories and TV
3 channels number;
4 b) creation apparatus which creates hyperlinking information of channels
5 broadcasting the same nature of program categories by referencing the correspondence
6 information, and
7 c) transmitting apparatus which transmits the hyperlinking information to TV
8 devices whereby upon successfully processing the broadcast hyperlinking information for

9 display on a TV screen, a viewer surfs among the channels specified in the hyperlinking
10 information.

- 1 44. A receiver for surfing hyperlinked information in a TV system, comprising:
- 2 a) storing apparatus, which receives program content including hyperlinks
- 3 and related channels;
- 4 b) classification information of program content related to the same
- 5 channels; and
- 6 e) control apparatus, which enables a viewer to access the classification
- 7 information and surf among related channels.